
THE STATUS IN BERNWOOD FOREST OF MOTH SPECIES WHICH ARE RECOGNISED AS NATIONALLY UNCOMMON

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I AM currently working to establish how the present moth fauna of Bernwood Forest, on the Oxon/Bucks border, compares with that at various times earlier in this century. I present the following information by way of a thank you to the entomologists who have sent me moth records already. At the same time I hope that readers who have any moth records for Bernwood which they have never submitted to a recording centre, might send them to me for inclusion in the annotated historical list, a first draft of which is now available (Waring 1988a).

Bernwood Forest, on the Oxon/Bucks border is composed of Hell Coppice, Shabbington Wood, Yorks Wood, Oakley Wood and Waterperry Wood. During the 1930s and 1940s Hell Coppice, in particular, developed a reputation amongst lepidopterists as an excellent collecting ground. However, during the 1940s timber merchants felled most of the trees and in the 1950s and 1960s the Forestry Commission planted conifers and mixed plantations of conifers and hardwoods over most of these woods, which are now effectively managed as a single unit. The Forestry Commission also improved the networks of roads, rides and ditches within the woods and used herbicides to control the regrowth of native plants while the crop-trees were becoming established (Stoakley 1963). Thomas (1988) reviews in detail the ways in which Bernwood has been managed this century. Entomologists such as Symes (1956), Dunk (1956) and Cribb (1962) were particularly concerned that the felling of the oaks, the planting of conifers and the use of chemicals would damage or destroy the entomological interest of the site. Furthermore exactly the same changes were taking place in many other woods up and down the country.

Since 1955, at Bernwood, there have been a series of conservation agreements between the Forestry Commission, the Nature Conservancy Council and the Berkshire, Buckinghamshire and Oxfordshire Naturalists Trust (Thomas 1988), with the aim of enabling wildlife to co-exist alongside the continuing commercial forestry operations. Special conservation measures have been undertaken in an attempt to conserve the butterflies and moths in particular. These measures have included the retention of some areas of native trees, the preservation of blackthorn thickets within the wood, creation of glades, widening of rides to prevent the conifers over-shading larval foodplants and developing shrubby fringes of native species on the edges of the plantations, a measure proposed by Heron (1953).

Peachey (1980) has studied the butterfly fauna of Bernwood in relation to management. I have previously compared the moth fauna of the conifer

plantations with an unplanted part of the wood consisting of native broadleaves (Waring 1988b, 1989). I am now interested in establishing the extent to which the moth fauna of Bernwood as a whole has survived in view of the management operations described above.

The accompanying Table shows all the species recorded from Bernwood which are considered to be nationally uncommon by Hadley (1984). The Table includes four species listed in the Red Data Book (Shirt 1987), none of which have been recorded in the 1980s. Hadley (1982) found that nine of the ten species of Red Data Book moths at Abbots Wood, East Sussex, disappeared between 1930 and 1980, during which time most of Abbots Wood was cleared and planted with conifers.

The Table indicates which of the rarer species seem to have disappeared from Bernwood and the periods in which the species were recorded. It is most important that our records are as complete as possible before attempting to explain why particular species have disappeared. For example we know that the Light Crimson Underwing, *Catocala promissa*, was still being recorded in numbers in 1947 in Hell Coppice (Emmet 1948). The last stand of mature oaks was felled in 1952 and none of our records of *C. promissa* post-date this. The larvae of *C. promissa* feed on oak and at other sites this moth is strongly associated with mature oak woodland rather than scrubby regrowth. Consequently felling of the last of the oak woodland in Hell Coppice is a probable cause of the disappearance of this moth. However, any evidence of good numbers of *C. promissa* after 1952 would require us to look for another explanation. I am particularly interested in records of the oak-dependent Heart Moth, *Dicycla oo* from the 1940s and 1950s for the same reasons.

Check-lists of presence or absence of records of species at particular times are a limited way of assessing changes in the moth fauna and if entomologists can supply the numbers of individuals or the number of visits on

KEY TO TABLES

* Key to national status symbols:

Nb = Nationally notable grade b, – a species recorded from between 31 -100 of the 10km grid squares in the British Isles according to information held at the Biological Records Centre, ITE Monks Wood.

Na = Nationally notable grade a, – a species recorded from 30 or fewer of the 10km grid squares in the British Isles according to the Biological Records Centre, ITE Monks Wood.

RDB3 = Red Data Book category 3, rare species with small populations that are at risk.

RDB2 = Red Data Book category 2, vulnerable species, with declining populations that are under threat throughout their range in Britain.

+ Species recorded in wood.

? Dubious records.

TABLE: THE STATUS IN BERNWOOD FOREST OF THE SPECIES OF MOTH WHICH ARE RECOGNISED AS NATIONALLY UNCOMMON BY THE INSECT RED DATA BOOK (SHIRT, 1987) AND THE NATIONAL REVIEW (HADLEY 1984)

(a) Species recorded in 1980s	National status* (Hadley 1984)	Periods for which records are known				Present status in Bernwood Forest. Further details in Waring 1988a.
		1920-39	1940-59	1960-79	1980-89	
Forester	Nb	+	+	+	+	Rare within the wood
Sallow Clearwing	Nb	+	+	+	+	Records refer to old burrows only
Poplar Luteostring	Nb	+	+	+	+	Frequent by aspen and poplar
Light Orange Underwing	Nb	+	+	+	+	Local and rare, in aspen stands
Argent and Sable	Nb	+	+	+	+	Frequently seen in rides with birch
Oaktree Pug	Nb	+	+	+	+	Frequent near the older oaks
Brindled White-spot	Nb	+	+	+	+	Occasional, larvae mainly in unplanted areas
Square-spot	Nb	+	+	+	+	Rare, a singleton in 1982
Broad-bordered	Na	+	+	+	+	Rare, last recorded 1981
Bee Hawk-moth	Na	+	+	+	+	Rare, a singleton in 1984
Small Black Arches	Nb	+	+	+	+	Frequent near aspen
Lead-coloured Drab	Nb	+	+	+	+	Rare, a singleton in 1984
Reddish Light Arches	Nb	+	+	+	+	Common in damper rides and open places
Mere Wainscot	Na	+	+	+	+	Common in over-grown coppice
Common Fanfoot	Nb	+	+	+	+	Rare and localised, on birch
Beautiful Brocade	Nb	+	+	+	+	Rare but regular, near alder
Brown Scallop	Nb	+	+	+	+	buckthorn
Marbled Pug	Na	+	+	+	+	Rare, near older oaks
Dotted Rustic	Nb	+	+	+	+	Occasional
Silvery Arches	Nb	+	+	+	+	Rare, a singleton in 1982
Silver Hook	Nb	+	+	+	+	Rare, a singleton in 1984
Sloe Pug	Na	+	+	+	+	In blackthorn bloom, probably widespread in wood
Satin Beauty	Nb	+	+	+	+	Occasional among conifers
White-marked	Nb	+	+	+	+	Rare, a singleton in 1984
Pale Pinion	Nb	+	+	+	+	Rare, a singleton in 1985
Twin-spotted Wainscot	Nb	+	+	+	+	Rare, a singleton in 1984
Silky Wainscot	Nb	+	+	+	+	Rare, a singleton in 1988

(b) Species not recorded in 1980s	National status* (Hadley 1984)	Periods for which records are known				Comments
		1920-39	1940-59	1960-79	1980-89	
Orange Upperwing	RDB3	+			-	One in Waterperry Wood, 1925
Ruddy carpet	Nb	+			-	Last seen in 1930s
Great Oak Beauty	Nb	+	?		-	Last seen in 1935
Small Chocolate Tip	Nb	+	?		-	Larva in 1930s reported by Symes (1956)
Heart Moth	Nb	+	+		-	Last seen in 1940
Drab Looper	Nb	+	+		-	Last seen in 1947
Barred Tooth-striped	Na	+	+		-	Last seen in 1940s
Narrow-bordered	Na	+	+		-	Last seen, as larvae, in 1952
Bee Hawk-moth						
Orange Footman	Nb	+	+		-	Last seen in 1958
Light Crimson Underwing	RDB3	+	+		-	Last seen in 1947
Small Eggar	RDB2	+	+	+	-	Last seen in 1961
Triple-spotted Pug	Na	+	+	+	-	Last seen 1974, probably overlooked
Double Kidney	Nb	+	+	+	-	Last seen in 1960s
White-spotted Pinion	Nb	+	+	+	-	Last seen in area in 1968
(Dingy Mocha	RDB3	(?)	(?)	?	-)	Record in Emmet (1948) retracted (Emmet pers comm) and Waters 1927 record of a larva is on birch and probably refers to <i>C. albipunctata</i>
Large Red-belted Clearwing	Na		+	+	-	Last seen 1963, probably overlooked
Lead-coloured Pug	Nb	+	+	+	-	Last seen 1964, probably overlooked
Buttoned Snout	Nb	+	+	+	-	Last recorded in area in 1964
Lunar Hornet Clearwing	Na		+	+	-	A single specimen in 1960, greatly under recorded
Maple Pug	Nb		+	+	-	Last records 1963, but probably still present on maple
(Pimpernel Pug	Nb		?		-)	These five species recorded only by
(Crescent Dart	Nb		?		-)	Clarke and probably only at his home
(Lunar Yellow Underwing	Nb		?		-)	trap at nearby Studley Village by
(Bordered Gothic	Nb		?		-)	rough ground. However the species
(Brighton Wainscot	Nb		?		-)	appear on his list for Bemwood

which particular species were recorded this will be a great help. For example, the Small Black Arches, *Meganola strigula* is still present in Bernwood, But it has undoubtedly been affected by the clearance of oak nevertheless. This oak-dependent moth is now a rarity in the wood. Only one individual has been recorded since the 1960s (Waring 1988a). Claude Rippon (1939) described it as numerous in the 1930s and Symes (1956) found it sparingly on oak trunks in July, in the 1920s and 1930s. The species remains common in nearby Stanton Great Wood and Holly Wood where mature oak woodland still survives (Waring 1988a). This change in status at Bernwood would be completely masked if we had no indication of the numbers of *M. strigula* that used to be recorded.

I look forward to receiving any additional records of moths from Bernwood, so that I may proceed with the analysis. I am interested in the common species as well as the rarities. For example it appears that no one recorded the presence of the March moth, *Alsophila aescularia*, or the Grey Pine Carpet, *Thera obeliscata*, in Bernwood until the 1960s.

Permits for recording moths in Bernwood can be obtained from the Nature Conservancy Council (South Region), Foxhold House, Crookham Common, Newbury, Berks RG15 8EL.

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Recent records of *Eupithecia abietaria* Goeze (Lep.: Geometridae), the Cloaked Pug, from Rothamsted Insect Survey light traps.

Eupithecia abietaria has a localised distribution and continues to be recorded in the RIS trap at Kielder Forest, Northumberland (Site No. 296, O.S. Grid Ref. NY 632 936). Further captures of single females were made at Rowardennan, Stirling (Site No. 97, O.S. Grid Ref. NS 378 958) on 5.viii.1989 and Yarner Wood, Devon (Site No. 266, O.S. Grid Ref. SX 786 788) on 19.vii.1989. Further investigation is required to determine whether resident populations exist at these sites.

Thanks are extended to P. Gough, R. McMath and P. Page who operate the RIS light traps at Kielder, Rowardennan and Yarner Wood respectively.— ADRIAN M. RILEY, Dept. of Entomology and Nematology, AFRC Inst. Arable Crops Research, Rothamsted Exp. Stn., Harpenden, Herts AL5 2JQ.

Another spring Humming-bird Hawkmoth

I observed a specimen of *Macroglossum stellatarum* L. feeding at the flowers of ornamental currant in my garden at Longworth at mid-day on 1st April 1990.— A. KENNARD, Martens End, Longworth, Abingdon, Oxon OX13 5EP.

An early Holly Blue

Despite the "early" season of 1990 I was somewhat surprised to see a male Holly Blue (*Celastrina argiolus* L.) in a garden at Abingdon, Oxford on 18th March 1990. A second (possibly the same one?) was seen later in the day a short distance away.— P. MILES, 29 Highfield Avenue, Cambridge CB4 2AJ.